



SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Dario Neri  
Lorenzo Tarli  
Francesca Viti  
Manfred Birchler

(ii) TITLE OF INVENTION:

SPECIFIC BINDING MOLECULES FOR SCINTIGRAPHY, CONJUGATES  
CONTAINING THEM AND THERAPEUTIC METHOD OF TREATMENT  
OF ANGIOGENESIS

(iii) NUMBER OF SEQUENCES: 21

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: PEPPER HAMILTON LLP  
(B) STREET: 600 Fourteenth Street, N.W.  
(C) CITY: Washington  
(D) STATE: D.C.  
(E) COUNTRY: U.S.A.  
(F) ZIP: 20005-2004

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy Disk  
(B) COMPUTER: IBM PC compatible  
(C) OPERATING SYSTEM: PC Windows  
(D) SOFTWARE: WP 8.0

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:  
(B) FILING DATE: April 28, 1999  
(C) PRIOR APPLICATION: US 09/075,338  
(D) PRIOR APPLICATION FILING DATE: May 11, 1998  
(E) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION

(A) NAME: Pepper Hamilton LLP  
(B) REGISTRATION NUMBER: 021269  
(C) REFERENCE/DOCKET NUMBER: 113000.301

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (202) 220-1200  
(B) TELEFAX: (202) 220-1665

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24  
(B) TYPE: DNA  
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:  
(B) LOCATION:  
(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: LMB1bis

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

gccccccatggc cgag

24

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 54  
(B) TYPE: DNA  
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DP47CDR1for

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

gagcctggcg gaccaggctc atmnnnnnnm ngctaaaggt gaatccagag gctg

54

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DP47CDR1back

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

atgagctggg tccgcaggc tcc

23

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 60
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DP47CDR2for

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

gtctgcgtat tatgtggtag cmnnactacc mnnaatmnnt gagacccact ccagccctt

60

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DP47CDR2back

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

acatactacg cagactccgt gaag

24

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 53
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: JforNot

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:  
tcattctcgatctggccgctttgatttcacacccgtcccttggccgaacg 53

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 47  
(B) TYPE: DNA  
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:  
(B) LOCATION:  
(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR1for  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:  
gtttctgctgttacccaggctaaamnngctgc tgcttaacactctgactg 47

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23  
(B) TYPE: DNA  
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:  
(B) LOCATION:  
(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR1back  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:  
ttagcctggtagccaggagaaacc 23

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 46  
(B) TYPE: DNA  
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:  
(B) LOCATION:  
(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR2for  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:  
gccagtgccctgctggatgcnnatagatgaggagcctggagcc 46

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21  
(B) TYPE: DNA  
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:  
(B) LOCATION:  
(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR2back  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:  
gcatccagca gggccactggc 21

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 45

- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE
- (ii) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DP47baNco

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

gccccccaggc atgccccatggc cgaggtgcag ctgttggagt ctggg

45

- (2) INFORMATION FOR SEQ ID NO:12:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 55
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

- (ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: CDR3for

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

ggttccctgg cccccagtagt caaaamnnmn mnnnnnnnttc gcacagtaat atacg

55

- (2) INFORMATION FOR SEQ ID NO:13:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

- (ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: VHpullth

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

gccccccaggc atgccccatggc cgag

24

- (2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 66
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

- (ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: Jassm

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

cccgctaccg ccactggacc catcgccact cgagacggtg accagggttc cctggccca

60

gtatgc

66

- (2) INFORMATION FOR SEQ ID NO:15:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 62
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

- (ii) FEATURE:

- (A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPK22assm

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

gatgggtcca gtggcggtag cgggggcgcg tcgactggcg aaattgtgtt gacgcagtct 60  
cc 62

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 63

(B) TYPE: DNA

(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPK3for

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

caccttggtc ccttggccga acgtmnnncgg mnnmnnnaccm nnctgctgac agtaatacac 60  
tgc 63

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 56

(B) TYPE: DNA

(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: Jfornot

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

gagtcattct cgacttgcgg ccgctttgat ttccaccttg gtcccttggc cgaacg 56

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24

(B) TYPE: DNA

(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: VLpullth

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

gatgggtcca gtggcggtag cggg 24

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 116

(B) TYPE: PRT

(C) ORGANISM:

VH antibody specific for ED-B domain of fibronectin

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe

20	25	30
Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val		
35	40	45
Ser Ser Ile Ser Gly Ser Ser Gly Thr Thr Tyr Tyr Ala Asp Ser Val		
50	55	60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr		
65	70	75
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys		
85	90	95
Ala Lys Pro Phe Pro Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val		
100	105	110
Thr Val Ser Ser		
115		

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14
- (B) TYPE: PRT
- (C) ORGANISM: ANTIBODY LINKER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Gly Asp Gly Ser Ser Gly Gly Ser Gly Gly Ala Ser Thr Gly		
1	5	10

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 108
- (B) TYPE: PRT
- (C) ORGANISM:

VL Antibody Specific for ED-B domain of Fibronectin

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly		
1	5	10
15		
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser		
20	25	30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu		
35	40	45
Ile Tyr Tyr Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser		
50	55	60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu		
65	70	75
80		
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Gly Arg Ile Pro		
85	90	95
Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys		
100	105	